

## CLAIMS

What is claimed is:

- 1 1. A method for provisioning databases for users on a wide area network, the method  
2 comprising the steps of:  
3 a first party managing one or more database systems;  
4 a plurality of second parties subscribing to database services supported by the one  
5 or more database systems managed by the first party; and  
6 providing, over a network, to database applications controlled by the second  
7 parties, access to the database services to which the second parties are  
8 subscribed.
- 1 2. The method of claim 1 wherein:  
2 at least one of said second parties is an application service provider that provides  
3 application services to a plurality of third parties over said network; and  
4 the step of providing access to the database services includes providing database  
5 services to an application used by said application service provider to  
6 provide said application services to said third parties.
- 1 3. The method of claim 1 further comprising the steps of:  
2 receiving over said network a request to perform a database management operation  
3 from a user associated with a particular second party of said plurality of  
4 second parties; and  
5 responding to said request by performing said database management operation on  
6 one or more databases controlled by said first party without human  
7 intervention by said first party.

1 4. The method of claim 1 wherein the one or more database systems are implemented  
2 on a set of database devices that include a plurality of database appliances, a database  
3 appliance comprising database software and non-database software tailored to the needs of  
4 the database software.

1 5. The method of claim 1 wherein the step of providing access over a network  
2 includes providing access over a public network of computer networks.

1 6. The method of claim 3 wherein the step of performing the database management  
2 operation involves allocating a different amount of resources to said particular second  
3 party than is currently allocated for said particular second party.

1 7. The method of claim 1, further comprising the step of delivering to a party over the  
2 network one or more messages which cause generation of user interfaces that allow the  
3 party to subscribe to said database services provided by said first party.

1 8. The method of claim 7 wherein the user interfaces contain controls for specifying  
2 user profile information, payment information, and selection of database services.

1 9. The method of claim 1, further comprising the step of delivering over the network,  
2 to a user associated with one of said second parties, one or more messages which cause  
3 generation of user interfaces that allow the user to access a database for a database service  
4 to which said one of said second parties has subscribed.

1 10. The method of claim 1, wherein:  
2 the first party also provides database application services over said network; and  
3 the method further comprises the step of delivering over the network, to a user  
4 associated with one of said second parties, one or more messages which

5                   cause generation of user interfaces that allow the user to access a database  
6                   application service to which said one of said second parties has subscribed.

1    11.    The method of claim 1, further comprising the step of delivering over the network,  
2    to a user associated with one of said second parties, one or more messages which cause  
3    generation of user interfaces that allow the user to indicate changes to at least one of  
4    profile information, payment information, and the selection of services to which said one  
5    of said second parties is subscribed.

1    12.    The method of claim 1, further comprising the step of delivering over the network,  
2    to a user associated with one of said second parties, one or more messages which cause  
3    generation of user interfaces that allow the user to supply content for a subscribed  
4    database.

1    13.    The method of claim 1, further comprising the step of delivering over the network,  
2    to a user associated with one of said second parties, one or more messages which cause  
3    generation of user interfaces that allow the user to develop a new database application.

1    14.    The method of claim 1, further comprising the step of delivering over the network,  
2    to a user associated with one of said second parties, one or more messages which cause  
3    generation of user interfaces that allow the user to integrate an external service.

1    15.    The method of claim 1, further comprising the step of delivering over the network,  
2    to a user associated with one of said second parties, one or more messages which cause  
3    generation of user interfaces that present a status of a user subscribed resource selected  
4    from database resources managed by said first party.

1    16.    The method of claim 1, further comprising the steps of:

2 delivering over the network, to a user associated with one of said second parties,  
3 one or more messages which cause generation of user interfaces that  
4 present the user with a user-selectable representation of a wizard for  
5 building a Web page with a database component associated with an  
6 interface to a database;  
7 receiving user input indicating the wizard; and  
8 executing said wizard, including presenting a series of screens to the user to  
9 prompt user input for building the Web page.

1 17. The method of claim 1, further comprising the step of the first party updating the  
2 one or more database systems by receiving from a community server over the network an  
3 update to the one or more database systems, wherein the community server provides the  
4 update to a plurality of service providers over said network.

1 18. The method of claim 1, further comprising the step of the first party sending to a  
2 community server a status of a user subscribed resource, wherein the user subscribed  
3 resource is maintained by said first party.

1 19. The method of claim 1, further comprising presenting to a user associated with  
2 said first party a user interface to allow said first party to configure a database device used  
3 to provide said database services as one of a dedicated device and a plurality of virtual  
4 devices.

1 20. The method of claim 1, further comprising presenting to a user associated with  
2 said first party a user interface to allow said first party to configure at least one of a  
3 dedicated device and a virtual device of a plurality of virtual devices as one of a staging  
4 device available only to a database service developer for developing database services,

5 and a production device for making database services available to a user who is not the  
6 database service developer.

1 21. The method of claim 20, further comprising presenting a user interface for  
2 transferring an application from a staging device to a production device.

1 22. The method of claim 7 wherein:  
2 the step of delivering to a party over the network one or more messages which  
3 cause generation of user interfaces that allow the party to subscribe to said  
4 database services is performed as part of a registration process;  
5 the interfaces include controls for receiving a user input value for a maximum  
6 amount of subscribed resources; and  
7 the method further includes the step of presenting an alert if an amount of  
8 subscribed resources consumed by said party exceeds a threshold  
9 percentage of the maximum amount of subscribed resources.

1 23. The method of claim 22, further comprising the steps of:  
2 receiving a user input value for a particular threshold percentage; and  
3 presenting an alert if an amount of resources consumed by said party exceeds the  
4 particular threshold percentage of the maximum amount of subscribed  
5 resources.

1 24. The method of claim 22, wherein the maximum amount of subscribed resources  
2 includes a maximum amount of at least one of  
3 an amount of storage space,  
4 a number of users connected to a platform in a period of time,  
5 an amount of processor time used in a period of time, and

6 a number of transactions completed in a period of time.

1 25. The method of claim 12, further comprising the steps of:  
2 presenting to the user a set of selectable sources of content;  
3 receiving user input indicating a selected source; and  
4 launching a source update process to connect to the selected source and update a  
5 database with information received from the selected sources.

1 26. The method of claim 25, wherein  
2 the user input indicating a selected source also indicates a schedule for updating  
3 from the selected source; and  
4 the source update process connects to the selected source according to the schedule  
5 for updating from the selected source.

1 27. The method of claim 12, further comprising the steps of:  
2 in response to user input that specifies that data should be loaded into a subscribed  
3 database, determining whether the subscribed database currently exists for  
4 said one of said second parties; and  
5 creating the subscribed database if the subscribed database does not currently exist  
6 for said one of said second parties.

1 28. The method of claim 13, further comprising the steps of:  
2 presenting representations of selectable application development kits;  
3 receiving user input indicating a selected development kit from the user; and  
4 launching a staging process including  
5 configuring consumable database resources on a staging database device,  
6 wherein a staging database device can be accessed by the user for

7 developing the new database application and cannot be accessed by  
8 users associated with other parties of said plurality of second  
9 parties,  
10 receiving development input from the user; and  
11 building a new application on the staging database device based on the  
12 selected development kit and the development input.

1 29. The method of claim 28, the step of developing the new database application  
2 further comprising the steps of  
3 after receiving user input indicating a selected development kit, determining  
4 whether a client process of the selected development kit must be  
5 downloaded to a computer of the user over the wide area network; and  
6 if it is determined the client process of the selected development kit must be  
7 downloaded, downloading the client process to the computer of the user  
8 over the wide area network before the step of building the new application.

1 30. The method of claim 28, the step of developing a new database application further  
2 comprising the steps of:  
3 receiving input from the user indicating the new application is ready for  
4 operational use; and  
5 in response to receiving input from the user indicating the new application is ready  
6 for operational use, launching a production transfer process including  
7 sending a request to the first party to transfer the new application to a  
8 production device on which the new application may be accessed by users  
9 who did not develop the new application.

1 31. The method of claim 14, further comprising integrating the external service,  
2 wherein the step of integrating comprises the steps of:  
3 presenting a representation of a selectable external service;  
4 receiving user input indicating a selected external service; and  
5 launching an integration process to provide the external service to the user.

1 32. The method of claim 31, wherein the selectable external service includes at least  
2 one of a payment service, a mobile Internet portal, an enterprise resource planning  
3 application, and a customer relationship management application.

1 33. The method of claim 1, further comprising the first party performing at least one of  
2 the steps of:  
3 setting up database parameters;  
4 reporting database usage;  
5 backing up the database;  
6 upgrading the database;  
7 controlling database versions;  
8 implementing database security; and  
9 implementing data security within the database.

1 34. The method of claim 1, further comprising the steps of:  
2 if a costing database does not already exist, then  
3 automatically creating the costing database of database resource usage by  
4 user, and  
5 initiating a costing model with price per unit of consumable resource per  
6 service;



7 inserting data into the costing database based on actual use of database resources  
8 by the user;  
9 executing the costing model to compute a cost-per-user based on the data in the  
10 costing database and the price per unit of consumable resource per service;  
11 and  
12 billing the user for the cost computed by the costing model.

1 35. The method of claim 33, wherein the costing model supports:  
2 fixed price per unit of usage;  
3 variable price per unit usage as a function of usage;  
4 flat price up to a maximum value of usage;  
5 different prices for different users;  
6 different prices for different services; and  
7 different prices for increments of usage above a maximum subscribed usage.

1 36. A computer-readable medium carrying instructions for provisioning databases for  
2 users on a wide area network, the instructions comprising instructions for performing the  
3 steps of:  
4 a first party managing one or more database systems;  
5 a plurality of second parties subscribing to database services supported by the one  
6 or more database systems managed by the first party; and  
7 providing, over a network, to database applications controlled by the second  
8 parties, access to the database services to which the second parties are  
9 subscribed.

1 37. The computer-readable medium of claim 36 wherein:

2 at least one of said second parties is an application service provider that provides  
3 application services to a plurality of third parties over said network; and  
4 the step of providing access to the database services includes providing database  
5 services to an application used by said application service provider to  
6 provide said application services to said third parties.

1 38. The computer-readable medium of claim 36 further comprising instructions for  
2 performing the steps of:  
3 receiving over said network a request to perform a database management operation  
4 from a user associated with a particular second party of said plurality of  
5 second parties; and  
6 responding to said request by performing said database management operation on  
7 one or more databases controlled by said first party without human  
8 intervention by said first party.

1 39. The computer-readable medium of claim 36 wherein the one or more database  
2 systems are implemented on a set of database devices that include a plurality of database  
3 appliances, a database appliance comprising database software and non-database software  
4 tailored to the needs of the database software.

1 40. The computer-readable medium of claim 36 wherein the step of providing access  
2 over a network includes providing access over a public network of computer networks.

1 41. The computer-readable medium of claim 38 wherein the step of performing the  
2 database management operation involves allocating a different amount of resources to said  
3 particular second party than is currently allocated for said particular second party.

1 42. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering to a party over the network one or more messages which  
3 cause generation of user interfaces that allow the party to subscribe to said database  
4 services provided by said first party.

1 43. The computer-readable medium of claim 42 wherein the user interfaces contain  
2 controls for specifying user profile information, payment information, and selection of  
3 database services.

1 44. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of said  
3 second parties, one or more messages which cause generation of user interfaces that allow  
4 the user to access a database for a database service to which said one of said second  
5 parties has subscribed.

1 45. The computer-readable medium of claim 36, wherein:  
2 the first party also provides database application services over said network; and  
3 the computer-readable medium further comprises instructions for performing the  
4 step of delivering over the network, to a user associated with one of said  
5 second parties, one or more messages which cause generation of user  
6 interfaces that allow the user to access a database application service to  
7 which said one of said second parties has subscribed.

1 46. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of  
3 said second parties, one or more messages which cause generation of user  
4 interfaces that allow the user to indicate changes to at least one of profile

5 information, payment information, and the selection of services to which said one  
6 of said second parties is subscribed.

1 47. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of  
3 said second parties, one or more messages which cause generation of user  
4 interfaces that allow the user to supply content for a subscribed database.

1 48. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of  
3 said second parties, one or more messages which cause generation of user  
4 interfaces that allow the user to develop a new database application.

1 49. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of  
3 said second parties, one or more messages which cause generation of user  
4 interfaces that allow the user to integrate an external service.

1 50. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of delivering over the network, to a user associated with one of  
3 said second parties, one or more messages which cause generation of user  
4 interfaces that present a status of a user subscribed resource selected from database  
5 resources managed by said first party.

1 51. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the steps of:  
3 delivering over the network, to a user associated with one of said second parties,  
4 one or more messages which cause generation of user interfaces that  
5 present the user with a user-selectable representation of a wizard for

6 building a Web page with a database component associated with an  
7 interface to a database;  
8 receiving user input indicating the wizard; and  
9 executing said wizard, including presenting a series of screens to the user to  
10 prompt user input for building the Web page.

1 52. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of the first party updating the one or more database systems by  
3 receiving from a community server over the network an update to the one or more  
4 database systems, wherein the community server provides the update to a plurality of  
5 service providers over said network.

1 53. The computer-readable medium of claim 36, further comprising instructions for  
2 performing the step of the first party sending to a community server a status of a  
3 user subscribed resource, wherein the user subscribed resource is maintained by  
4 said first party.

1 54. The computer-readable medium of claim 36, further comprising instructions for  
2 presenting to a user associated with said first party a user interface to allow said first party  
3 to configure a database device used to provide said database services as one of a dedicated  
4 device and a plurality of virtual devices.

1 55. The computer-readable medium of claim 36, further comprising instructions for  
2 presenting to a user associated with said first party a user interface to allow said first party  
3 to configure at least one of a dedicated device and a virtual device of a plurality of virtual  
4 devices as one of a staging device available only to a database service developer for  
5 developing database services, and a production device for making database services  
6 available to a user who is not the database service developer.

1 56. The computer-readable medium of claim 55, further comprising instructions for  
2 presenting a user interface for transferring an application from a staging device to a  
3 production device.

1 57. The computer-readable medium of claim 42 wherein:  
2 the step of delivering to a party over the network one or more messages which  
3 cause generation of user interfaces that allow the party to subscribe to said  
4 database services is performed as part of a registration process;  
5 the interfaces include controls for receiving a user input value for a maximum  
6 amount of subscribed resources; and  
7 the computer-readable medium further includes instructions for the step of  
8 presenting an alert if an amount of subscribed resources consumed by said  
9 party exceeds a threshold percentage of the maximum amount of  
10 subscribed resources.

1 58. The computer-readable medium of claim 57, further comprising instructions for  
2 performing the steps of:  
3 receiving a user input value for a particular threshold percentage; and  
4 presenting an alert if an amount of resources consumed by said party exceeds the  
5 particular threshold percentage of the maximum amount of subscribed  
6 resources.

1 59. The computer-readable medium of claim 57, wherein the maximum amount of  
2 subscribed resources includes a maximum amount of at least one of  
3 an amount of storage space,  
4 a number of users connected to a platform in a period of time,  
5 an amount of processor time used in a period of time, and

6 a number of transactions completed in a period of time.

1 60. The computer-readable medium of claim 47, further comprising instructions for  
2 performing the steps of:

3 presenting to the user a set of selectable sources of content;

4 receiving user input indicating a selected source; and

5 launching a source update process to connect to the selected source and update a  
6 database with information received from the selected sources.

1 61. The computer-readable medium of claim 60, wherein

2 the user input indicating a selected source also indicates a schedule for updating

3 from the selected source; and

4 the source update process connects to the selected source according to the schedule  
5 for updating from the selected source.

1 62. The computer-readable medium of claim 47, further comprising instructions for  
2 performing the steps of:

3 in response to user input that specifies that data should be loaded into a subscribed

4 database, determining whether the subscribed database currently exists for

5 said one of said second parties; and

6 creating the subscribed database if the subscribed database does not currently exist  
7 for said one of said second parties.

1 63. The computer-readable medium of claim 48, further comprising instructions for  
2 performing the steps of:

3 presenting representations of selectable application development kits;

4 receiving user input indicating a selected development kit from the user; and

5 launching a staging process including  
6 configuring consumable database resources on a staging database device,  
7 wherein a staging database device can be accessed by the user for  
8 developing the new database application and cannot be accessed by  
9 users associated with other parties of said plurality of second  
10 parties,  
11 receiving development input from the user; and  
12 building a new application on the staging database device based on the  
13 selected development kit and the development input.

1 64. The computer-readable medium of claim 63, the step of developing the new  
2 database application further comprising the steps of  
3 after receiving user input indicating a selected development kit, determining  
4 whether a client process of the selected development kit must be  
5 downloaded to a computer of the user over the wide area network; and  
6 if it is determined the client process of the selected development kit must be  
7 downloaded, downloading the client process to the computer of the user  
8 over the wide area network before the step of building the new application.

1 65. The computer-readable medium of claim 63, the step of developing a new database  
2 application further comprising the steps of:  
3 receiving input from the user indicating the new application is ready for  
4 operational use; and  
5 in response to receiving input from the user indicating the new application is ready  
6 for operational use, launching a production transfer process including  
7 sending a request to the first party to transfer the new application to a



8                   production device on which the new application may be accessed by users  
9                   who did not develop the new application.

1   66.    The computer-readable medium of claim 49, further comprising instructions for  
2   integrating the external service, wherein the step of integrating comprises the steps of:  
3           presenting a representation of a selectable external service;  
4           receiving user input indicating a selected external service; and  
5           launching an integration process to provide the external service to the user.

1   67.    The computer-readable medium of claim 66, wherein the selectable external  
2   service includes at least one of a payment service, a mobile Internet portal, an enterprise  
3   resource planning application, and a customer relationship management application.

1   68.    The computer-readable medium of claim 36, further comprising instructions for  
2   the first party performing at least one of the steps of:  
3           setting up database parameters;  
4           reporting database usage;  
5           backing up the database;  
6           upgrading the database;  
7           controlling database versions;  
8           implementing database security; and  
9           implementing data security within the database.

1   69.    The computer-readable medium of claim 36, further comprising instructions for  
2   performing the steps of:  
3           if a costing database does not already exist, then

4 automatically creating the costing database of database resource usage by  
5 user, and  
6 initiating a costing model with price per unit of consumable resource per  
7 service;  
8 inserting data into the costing database based on actual use of database resources  
9 by the user;  
10 executing the costing model to compute a cost-per-user based on the data in the  
11 costing database and the price per unit of consumable resource per service;  
12 and  
13 billing the user for the cost computed by the costing model.

1 70. The computer-readable medium of claim 68, wherein the costing model supports:  
2 fixed price per unit of usage;  
3 variable price per unit usage as a function of usage;  
4 flat price up to a maximum value of usage;  
5 different prices for different users;  
6 different prices for different services; and  
7 different prices for increments of usage above a maximum subscribed usage.